

#7
TECH CENTER 1600/29001638
AUG 16 2001

RECEIVED

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/702,374DATE: 07/19/2001
TIME: 16:01:20Input Set : A:\ES.txt
Output Set: N:\CRF3\07192001\I702374.raw

ENTERED

3 <110> APPLICANT: CHAPMAN, KENT D.
 4 AUSTIN-BROWN, SHEA
 6 <120> TITLE OF INVENTION: METHODS FOR EXTENDING THE FRESHNESS OF CUT FLOWERS,
 ORNAMENTAL TREES AND

7 PLANT CUTTINGS

9 <130> FILE REFERENCE: 4380.000400
 11 <140> CURRENT APPLICATION NUMBER: 09/702,374
 12 <141> CURRENT FILING DATE: 2000-10-30
 14 <150> PRIOR APPLICATION NUMBER: 60/162,178
 15 <151> PRIOR FILING DATE: 1999-10-28
 17 <160> NUMBER OF SEQ ID NOS: 15
 19 <170> SOFTWARE: PatentIn version 3.0
 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 1173
 23 <212> TYPE: DNA
 24 <213> ORGANISM: Nicotiana tabacum
 26 <400> SEQUENCE: 1

27	ggaaagtgtct	gggaggacat	gttcaatgca	ataaaatcagg	ctcgtcgggt	gatttacatt	60
29	acaggatgggt	cagtgtacca	cctagttaca	cttggtaggg	ataatggaaa	agctgaggaa	120
31	agcatgttag	gggaaattct	caagaggaaa	tcccaagaag	gtgtgagagt	actgcttctc	180
33	atatgggatg	atcctacctc	ttcgaagagc	atcttggat	acaaaagtga	aggaatcatg	240
35	ggaacttagtg	atgaagaaac	tcgtcgctat	tttaagcatt	cttcagtgca	cgtgctactt	300
37	tgtccccgtt	ctgctggaaa	agggcacagc	tgggtcaaaa	aacaggaaac	tggaacaata	360
39	tacacacatc	atcagaaaac	tgtaatagtg	gatgtggatg	ctggtaatta	ccagagaaaag	420
41	attatcgctt	tcgttggtgg	ccttgatttg	tgcaaagggc	gttatgatac	tccacaacac	480
43	cctatcttta	aaacatgtca	aatgtgcac	aaagatgact	atcatcagcc	taactacacg	540
45	gccctacta	ccgggtgtcc	tagagaacct	tggcatgatt	tacatagtcg	gatcgaggg	600
47	cctgctgcat	atgatgtcct	aactaacttc	gaggagcgt	ggttgaaggc	ttcaaagcgc	660
49	catggacttc	aaaagatgaa	agttcacaa	gatgatgcat	tactccaact	tgacaggatt	720
51	tccgacatat	aaaaaatagc	tgtatgtccct	tgcctaggag	aagatgatgc	agatacgtgg	780
53	cacgtgcaga	ttttccggtc	gattgactcc	aactctgtta	aaggtttccc	caaagatccc	840
55	aaagaagcca	ctaacaagaa	tctagttgt	ggcaagaatg	tgctgataga	tatgagcata	900
57	catactgcct	atgtaaaggc	aatccgagct	gcccaacatt	tcatctacat	tgagaaccag	960
59	tacttcctag	ggtcctcata	caattggaa	aactaccaag	atttaggtgc	aaataacttg	1020
61	ataccgatgg	agattgtct	aaaaattgcc	aacaaaatac	ggccaaatga	gaggtttca	1080
63	gtatatataa	ttgttcctat	gtggccagag	ggtgtccaa	ccagtaactgc	tactcagaga	1140
65	atacttttt	ggcaacacaa	aaccatagag	atg			1173

68 <210> SEQ ID NO: 2

69 <211> LENGTH: 391

70 <212> TYPE: PRT

71 <213> ORGANISM: Nicotiana tabacum

73 <400> SEQUENCE: 2

75 Gly Lys Cys Trp Glu Asp Met Phe Asn Ala Ile Asn Gln Ala Arg Arg

76 1 5 10 15

78 Leu Ile Tyr Ile Thr Gly Trp Ser Val Tyr His Leu Val Thr Leu Val

79 20 25 30

81 Arg Asp Asn Gly Lys Ala Glu Glu Ser Met Leu Gly Glu Ile Leu Lys

82 35 40 45

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84 Arg Lys Ser Gln Glu Gly Val Arg Val Leu Leu Leu Ile Trp Asp Asp
85 50 55 60
87 Pro Thr Ser Ser Lys Ser Ile Leu Gly Tyr Lys Ser Glu Gly Ile Met
88 65 70 75 80
90 Gly Thr Ser Asp Glu Glu Thr Arg Arg Tyr Phe Lys His Ser Ser Val
91 85 90 95
93 His Val Leu Leu Cys Pro Arg Ser Ala Gly Lys Gly His Ser Trp Val
94 100 105 110
96 Lys Lys Gln Glu Thr Gly Thr Ile Tyr Thr His His Gln Lys Thr Val
97 115 120 125
99 Ile Val Asp Val Asp Ala Gly Asn Tyr Gln Arg Lys Ile Ile Ala Phe
100 130 135 140
102 Val Gly Gly Leu Asp Leu Cys Lys Gly Arg Tyr Asp Thr Pro Gln His
103 145 150 155 160
105 Pro Ile Phe Lys Thr Leu Gln Asn Val His Lys Asp Asp Tyr His Gln
106 165 170 175
108 Pro Asn Tyr Thr Gly Pro Thr Thr Gly Cys Pro Arg Glu Pro Trp His
109 180 185 190
111 Asp Leu His Ser Arg Ile Glu Gly Pro Ala Ala Tyr Asp Val Leu Thr
112 195 200 205
114 Asn Phe Glu Glu Arg Trp Leu Lys Ala Ser Lys Arg His Gly Leu Gln
115 210 215 220
117 Lys Met Lys Ala Ser Gln Asp Asp Ala Leu Leu Gln Leu Asp Arg Ile
118 225 230 235 240
120 Ser Asp Ile Leu Lys Ile Ala Asp Val Pro Cys Leu Gly Glu Asp Asp
121 245 250 255
123 Ala Asp Thr Trp His Val Gln Ile Phe Arg Ser Ile Asp Ser Asn Ser
124 260 265 270
126 Val Lys Gly Phe Pro Lys Asp Pro Lys Glu Ala Thr Asn Lys Asn Leu
127 275 280 285
129 Val Cys Gly Lys Asn Val Leu Ile Asp Met Ser Ile His Thr Ala Tyr
130 290 295 300
132 Val Lys Ala Ile Arg Ala Ala Gln His Phe Ile Tyr Ile Glu Asn Gln
133 305 310 315 320
135 Tyr Phe Leu Gly Ser Ser Tyr Asn Trp Asn Asn Tyr Gln Asp Leu Gly
136 325 330 335
138 Ala Asn Asn Leu Ile Pro Met Glu Ile Ala Leu Lys Ile Ala Asn Lys
139 340 345 350
141 Ile Arg Ala Asn Glu Arg Phe Ser Val Tyr Ile Ile Val Pro Met Trp
142 355 360 365
144 Pro Glu Gly Val Pro Thr Ser Thr Ala Thr Gln Arg Ile Leu Phe Thr
145 370 375 380
147 Gln His Lys Thr Ile Glu Met
148 385 390
150 <210> SEQ ID NO: 3
151 <211> LENGTH: 10
152 <212> TYPE: PRT
153 <213> ORGANISM: Nicotiana tabacum
155 <400> SEQUENCE: 3

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Input Set : A:\ES.txt
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157 Gly Gly Gln His Lys Thr Ile Glu Met Met
158 1 5 10
160 <210> SEQ ID NO: 4
161 <211> LENGTH: 26
162 <212> TYPE: DNA
163 <213> ORGANISM: Nicotiana tabacum
165 <220> FEATURE:
166 <221> NAME/KEY: misc_feature
167 <222> LOCATION: (13)..(13)
168 <223> OTHER INFORMATION: N = ANY NUCLEOTIDE
171 <400> SEQUENCE: 4

W6 172 catcatytcד atngtyttrt gytgcc 26

175 <210> SEQ ID NO: 5
176 <211> LENGTH: 9
177 <212> TYPE: PRT
178 <213> ORGANISM: Nicotiana tabacum
180 <400> SEQUENCE: 5
182 Ile Tyr Thr His His Glu Lys Ala Cys
183 1 5
185 <210> SEQ ID NO: 6
186 <211> LENGTH: 23
187 <212> TYPE: DNA
188 <213> ORGANISM: Nicotiana tabacum
190 <220> FEATURE:
191 <221> NAME/KEY: misc_feature
192 <222> LOCATION: (9)..(9)
193 <223> OTHER INFORMATION: N = ANY NUCLEOTIDE
196 <400> SEQUENCE: 6

W6 197 athtayacnc aycaygaraa rac 23

200 <210> SEQ ID NO: 7
201 <211> LENGTH: 11
202 <212> TYPE: PRT
203 <213> ORGANISM: Nicotiana tabacum
205 <400> SEQUENCE: 7
207 Cys Asn Ile Tyr Thr His His Glu Lys Ala Cys
208 1 5 10
210 <210> SEQ ID NO: 8
211 <211> LENGTH: 25
212 <212> TYPE: DNA
213 <213> ORGANISM: Nicotiana tabacum
215 <220> FEATURE:
216 <221> NAME/KEY: misc_feature
217 <222> LOCATION: (15)..(15)
218 <223> OTHER INFORMATION: N = ANY NUCLEOTIDE
221 <220> FEATURE:
222 <221> NAME/KEY: misc_feature
223 <222> LOCATION: (24)..(24)
224 <223> OTHER INFORMATION: N = ANY NUCLEOTIDE
227 <400> SEQUENCE: 8

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Input Set : A:\ES.txt
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Wt> 228 gtyttypcrt grtgngrtrta datng 25
 231 <210> SEQ ID NO: 9
 232 <211> LENGTH: 8
 233 <212> TYPE: PRT
 234 <213> ORGANISM: Nicotiana tabacum
 236 <400> SEQUENCE: 9
 238 Glu Cys Trp Phe Trp Cys Gly Gly
 239 1 5
 241 <210> SEQ ID NO: 10
 242 <211> LENGTH: 20
 243 <212> TYPE: DNA
 244 <213> ORGANISM: Nicotiana tabacum
 246 <400> SEQUENCE: 10
 247 gartgytggt tytggtgygg 20
 250 <210> SEQ ID NO: 11
 251 <211> LENGTH: 8
 252 <212> TYPE: PRT
 253 <213> ORGANISM: Nicotiana tabacum
 255 <400> SEQUENCE: 11
 257 His Gly Lys Cys Trp Glu Asp Met
 258 1 5
 260 <210> SEQ ID NO: 12
 261 <211> LENGTH: 24
 262 <212> TYPE: DNA
 263 <213> ORGANISM: Nicotiana tabacum
 265 <220> FEATURE:
 266 <221> NAME/KEY: misc_feature
 267 <222> LOCATION: (6)..(6)
 268 <223> OTHER INFORMATION: N = C, G, A or T
 271 <400> SEQUENCE: 12
 Wt> 272 cayggnnaart gytgggargaa yatg 24
 275 <210> SEQ ID NO: 13
 276 <211> LENGTH: 9
 277 <212> TYPE: PRT
 278 <213> ORGANISM: Nicotiana tabacum
 280 <400> SEQUENCE: 13
 282 Glu Glu Pro Glu Asn Met Glu Cys Gly
 283 1 5
 285 <210> SEQ ID NO: 14
 286 <211> LENGTH: 25
 287 <212> TYPE: DNA
 288 <213> ORGANISM: Nicotiana tabacum
 290 <220> FEATURE:
 291 <221> NAME/KEY: misc_feature
 292 <222> LOCATION: (17)..(17)
 293 <223> OTHER INFORMATION: N = C, G, A or T
 296 <400> SEQUENCE: 14
 Wt> 297 crcaytccat rttytcnggy tcytc 25
 300 <210> SEQ ID NO: 15

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Input Set : A:\ES.txt
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301 <211> LENGTH: 8
302 <212> TYPE: PRT
303 <213> ORGANISM: Nicotiana tabacum
305 <220> FEATURE:
306 <221> NAME/KEY: misc_feature
307 <222> LOCATION: (2)..(2)
308 <223> OTHER INFORMATION: X = ANY AMINO ACID
311 <220> FEATURE:
312 <221> NAME/KEY: misc_feature
313 <222> LOCATION: (4)..(7)
314 <223> OTHER INFORMATION: X = ANY AMINO ACID
317 <400> SEQUENCE: 15
319 His Xaa Lys Xaa Xaa Xaa Xaa Asp
320 1 5

W-
QK

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/702,374

DATE: 07/19/2001
TIME: 16:01:21

Input Set : A:\ES.txt
Output Set: N:\CRF3\07192001\I702374.raw

L:172 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:197 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:228 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:297 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:319 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15